

DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: LINCOLN POND	Lake Area (ha): 4.05
Town: AMHERST	Maximum depth (m): 2.4
County: Hillsborough	Mean depth (m): 0.8
River Basin: Merrimack	Volume (m ³): 33000
Latitude: 42°53'10" N	Relative depth: 1.1
Longitude: 71°36'30" W	Shore configuration: 1.12
Elevation (ft): 270	Areal water load (m/yr): 6.37
Shore length (m): 800	Flushing rate (yr ⁻¹): 7.80
Watershed area (ha): 57.1	P retention coeff.: 0.62
% watershed ponded: 0.0	Lake type: natural w/dam

BIOLOGICAL:

		25 February 1992	5 August 1991
DOM. PHYTOPLANKTON (% TOTAL)	#1	DINOBRYON 98%	COELOSPHAERIUM 30%
	#2		MELOSIRA 30%
	#3		DINOBRYON 25%
PHYTOPLANKTON ABUNDANCE (cells/mL)			525
CHLOROPHYLL-A (µg/L)			2.87
DOM. ZOOPLANKTON (% TOTAL)	#1	CILIATE SPP.>99%	DIFFLUGIA 65%
	#2	(ALL ZOOPLANKTON	KERATELLA 20%
	#3	WERE VERY SPARSE)	
ROTIFERS/LITER		<1	
MICROCRUSTACEA/LITER		<1	
ZOOPLANKTON ABUNDANCE (#/L)		22	
VASCULAR PLANT ABUNDANCE			Common
SECCHI DISK TRANSPARENCY (m)			1.4 Visible on bottom
BOTTOM DISSOLVED OXYGEN (mg/L)		14.5	8.3
BACTERIA (fecal col., #/100 ml)	#1		
	#2		
	#3		

SUMMER THERMAL STRATIFICATION:

not stratified

Depth of thermocline (m): None
Hypolimnion volume (m³) : None
Anoxic volume (m³) : None

CHEMICAL:

Lake: LINCOLN POND
Town: AMHERST

	25 February 1992		5 August 1991		
DEPTH (m)	1.0		1.0		
pH (units)	6.7		7.5		
A.N.C. (Alkalinity)	14.9		16.2		
NITRATE NITROGEN	0.03		< 0.05		
TOTAL KJELDAHL NITROGEN					
TOTAL PHOSPHORUS	0.019		0.021		
CONDUCTIVITY (μ mhos/cm)	142.7		129.1		
APPARENT COLOR (cpu)	16		24		
MAGNESIUM			1.05		
CALCIUM			4.1		
SODIUM			17.4		
POTASSIUM			0.68		
CHLORIDE	27		25		
SULFATE	10		6		
TN : TP					
CALCITE SATURATION INDEX			2.0		

All results in mg/L unless indicated otherwise

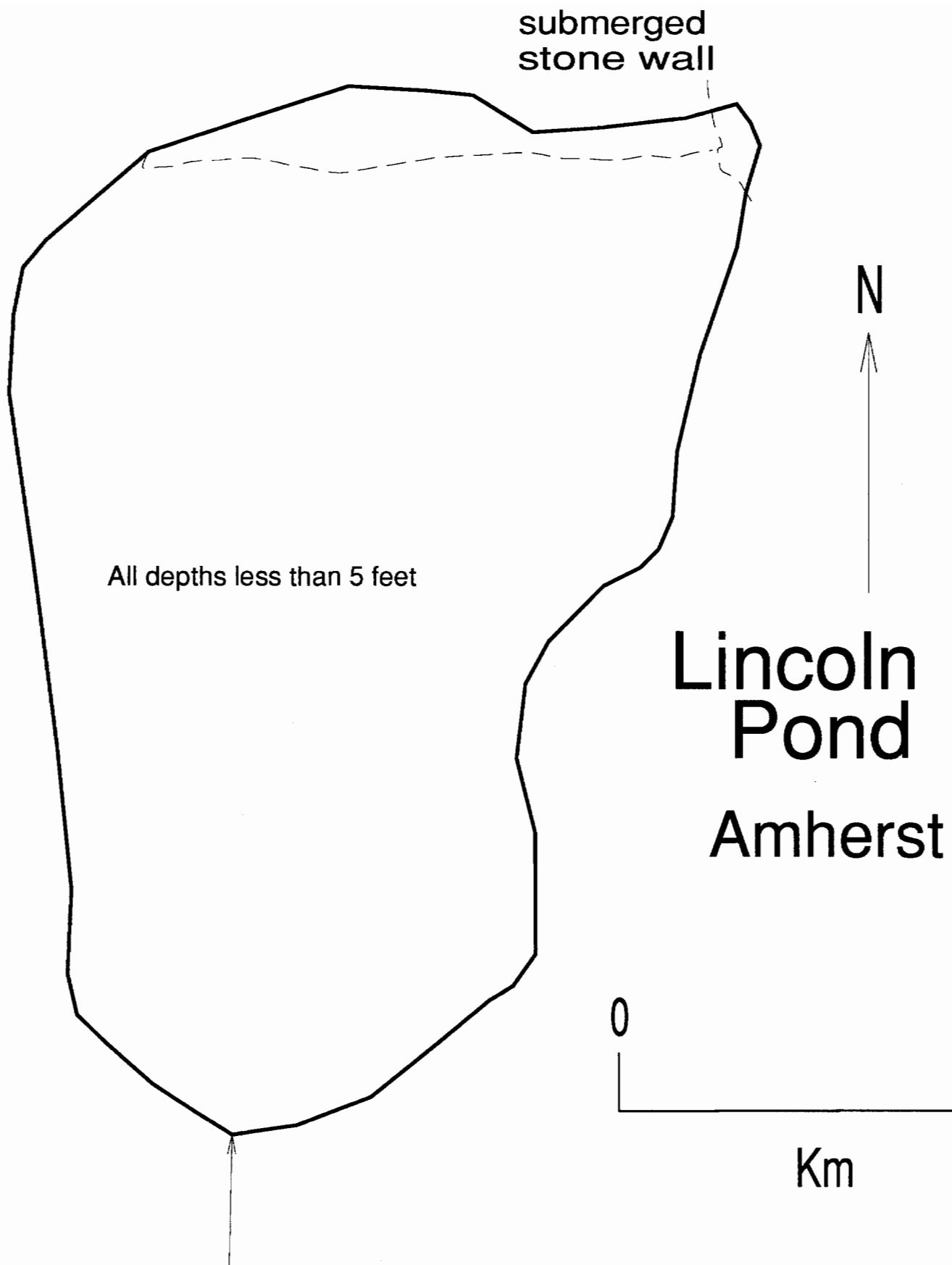
TROPHIC CLASSIFICATION: 1991

D.O. S.D. PLANT CHL TOTAL CLASS

**	3	3	0	6	Meso.
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COMMENTS:

1. Pond was not listed in the 1964 state publication of lakes and ponds (NHSP, 1964).
2. Although the map indicates all depths were less than 5 feet, the maximum depth of the pond is listed as 8 feet (2.4 m). The water level was down 3 feet during the summer survey.
3. Greens (30%) and Cryptomonads (30%) were the dominant classes of wholewater plankton. Tiny green flagellates (20%), Microcystis (15%) and Chroomonas (15%) were the dominant genera.



[illegible]

TOWN: AMHERST
WEATHER: WARM & OVERCAST; LIGHT BREEZE

[illegible]

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SECCHI DISK (m):    1.4 VOB      COMMENTS:
BOTTOM DEPTH (m):   1.4
TIME: 1045
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***Dissolved oxygen values are in mg/L**

[illegible]